

L Number	Hits	Search Text	DB	Time stamp
1	1235398	optical	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/09/05 10:05
2	38516	logic adj2 gate	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/09/05 10:06
3	434	optical with (logic adj2 gate)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/09/05 10:06
4	322713	interference	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/09/05 10:06
5	89	(optical with (logic adj2 gate)) and interference	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/09/05 10:15
6	52854	(257/\$)[ccls]	USPAT	2001/09/05 10:16
7	20	(optical with (logic adj2 gate)) and ((257/\$)[ccls])	USPAT	2001/09/05 10:19
8	5710	planarizing	USPAT	2001/09/05 10:19
9	1	(optical with (logic adj2 gate)) and planarizing	USPAT	2001/09/05 10:19
10	1121	((257/\$)[ccls]) and planarizing	USPAT	2001/09/05 10:20
11	7746	doped adj silicon	USPAT	2001/09/05 10:20
12	29	planarizing with (doped adj silicon)	USPAT	2001/09/05 10:21
13	42316	(438/\$)[ccls]	USPAT	2001/09/05 10:21
14	3	(optical with (logic adj2 gate)) and ((438/\$)[ccls])	USPAT	2001/09/05 10:22

US-PAT-NO: 5239173

DOCUMENT-IDENTIFIER: US 5239173 A // 5,160,838.

TITLE: Binary data processor using diffraction and interference of waves

DATE-ISSUED: August 24, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE
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COUNTRY			
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Yang; Tai-Her	Dzan-Hwa	N/A	N/A
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TWX

APPL-NO: 7/ 895931

DATE FILED: June 9, 1992

PARENT-CASE:

CROSS-REFERENCE TO RELATED APPLICATIONS The present invention constitutes a

continuation-in-part of U.S. patent application Ser. No. 580,637 filed on

Sep. 11, 1990, now U.S. Pat. No. 5,160,838, which in turn is a continuation-in-part of U.S. patent application Ser. No. 372,629 filed on

Jun. 28, 1989, abandoned, which in turn is a continuation-in-part of U.S.

patent application Ser. No. 069,153 filed on Jul. 2, 1987, abandoned, the

disclosures of which are incorporated herein by their entireties, respectively.

INT-CL: [5] H01J040/14

US-CL-ISSUED: 250/214S, 377/102

US-CL-CURRENT: 250/214LS, 377/102

FIELD-OF-SEARCH: 250/551; 250/214LS ; 377/102 ; 365/109 ; 365/110 ; 365/111 ; 359/558

; 359/565 ; 359/566 ; 359/561

REF-CITED:

U.S. PATENT DOCUMENTS

PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
3358146	December 1967	Ing et al.	250/214LS
3680080	July 1972	Maure	250/214LS

ART-UNIT: 259

PRIMARY-EXAMINER: Nelms; David C.

ATTY-AGENT-FIRM: Bloom; Leonard

ABSTRACT:

An optical binary data processor which utilizes a plurality of light beams

(or other waves, such as sound waves) which diffract at two or more apertures

and which interfere such that the resulting pattern of illumination may be read

to yield a particular logic operation. The optical data

processor is capable
of performing conventional binary logic operations on anywhere
from two to N
optical inputs, and multiple processors may be cascaded to
perform any level of
combinational logic.

35 Claims, 6 Drawing figures